



X-Plain™ *Carpal Tunnel-Open* **Reference Summary**

Carpal Tunnel Syndrome is a common condition that causes pain and numbness in the hand, and affects its usage.

Doctors may recommend surgery for people suffering from carpal tunnel syndrome.

If your doctor recommends surgical treatment for your condition, the decision whether or not to have surgery is also yours.

This reference summary will help you understand better the benefits and risks of this surgery.

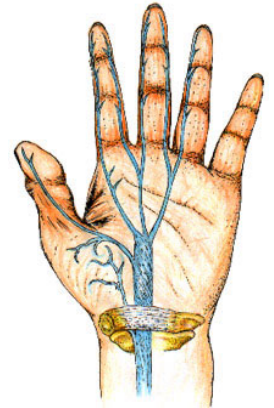
Anatomy

A major nerve, called the median nerve, passes through a narrow tunnel at the wrist.

This tunnel is called the carpal tunnel, which means the wrist tunnel. The floor of the carpal tunnel is formed of bones called the carpal bones and the roof consists of a thick ligament.

The median nerve supplies sensation to the thumb, index finger, middle finger, and half of the ring finger. It also supplies some thumb muscles.

Several tendons pass through the carpal tunnel along with the median nerve. They allow the muscles in the forearm to move the fingers.



Symptoms And Their Causes

When the ligament in the carpal tunnel thickens, it puts pressure on the nerve. This causes numbness and possibly pain in the first three to four fingers of the hand.

These symptoms usually affect the palmar aspect of the hand starting in the wrist and shooting down into the hand.

Some numbness and some pain may be seen in the forearm but not higher than that. The symptoms are worse at night. They may wake the patient up.

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Patients tend to drop objects because of the weakness, numbness and clumsiness.

The most common reason for carpal tunnel syndrome is the thickening of the ligament. There may be, however, other reasons for this syndrome. Other reasons include swelling of the tissues and the bones surrounding the carpal tunnel, as in rheumatoid arthritis. Fractures can affect the nerves resulting in the carpal tunnel syndrome.

Diseases such as diabetes can also cause symptoms similar to carpal tunnel syndrome, because diabetes may damage the median nerve.

Alternative Treatments

Avoiding repetitive motion may help with the symptoms.

Alternative treatment includes bracing with a splint.

Injections of steroid in the carpal tunnel itself is also a possibility.

When all else fails, an operation may help.

Surgical Treatment

All surgical procedures aim at taking the pressure off the nerve by cutting the ligament.

The operation is done through a skin incision.

When the ligament is divided, the pressure on the nerve is relieved. That is why this surgery is called carpal tunnel release.

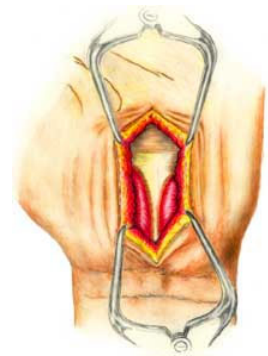
The operation can be done under local or general anesthesia.

Carpal tunnel release is an outpatient operation where the patient goes home the same day of the operation.

Risks And Complications

This operation is very safe with excellent results. There are, however, several possible risks and complications, which are unlikely but possible.

You need to know about them just in case they happen. By being informed you may be able to help your doctor detect complications early.



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The risks and complications include those related to anesthesia and those related to any type of surgery.

Risks related to anesthesia will be discussed with you in greater detail by your anesthesiologist.

Some of the risks are seen in any type of surgery. These include:

- Infection, deep in the carpal tunnel or at the skin level.
- Bleeding
- Skin scar that may be painful or ugly.

Other risks and complications are related specifically to this surgery. These again are very rare, however it is important to know about them. The nerve may be injured resulting in weakness, paralysis and loss of feeling in the hand.

The tendon may be injured resulting in weakness of the hand.

There is also the possibility that the operation may not help the symptoms or may even make them worse, especially if the nerve has already been permanently damaged by the compression or by other diseases such as diabetes. This operation is however very successful in improving the symptoms.

After The Surgery

Your hand will be bandaged. Your doctor will ask you to keep your hand elevated above the heart level to reduce swelling. When you shower, you will need to cover the dressing with a plastic bag.

Your doctor will tell you how long it will take before you go back to work. This depends on your age, type of work, your surgery, as well as other factors.

Your doctor will arrange for a follow-up visit to examine the incision and remove any sutures. Your doctor will indicate the hand rehabilitation program suitable for you.

Summary

Surgery to release the carpal tunnel can help relieve your hand pain and numbness when other non-surgical treatments fail.



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This operation is very safe with excellent results. However, as you have learned, complications may happen. Knowing about them will help you detect them early if they happen.

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